

Rupture Pin A BRAND of \_\_\_\_\_  
Taylor Valve Technology

# GET THE POWER OF THE PIN

MODEL C

## Angle Type Model

FROM THE  
CREATORS  
OF THE  
*Original*  
BUCKLING  
PIN  
VALVE



The **Model C** holds a bubble-tight, closed position until pressure reaches an exact set point. At set point, the valve instantly opens to relieve pressure from a protected system.

- Wide variety of pressures ratings and settings.
- Orifices usually full bore or greater.
- Reliable settings.
- Utilizes proven design principle – Euler's Law.
- Provides bubble-tight seal in closed position.
- +/- 5% accuracy of set pressure. Accuracy usually held below +/- 3%.
- Stainless steel seat and piston – standard.
- Reseats rapidly without opening the valve or line to atmosphere.
- Pin flag shows the pin code, valve serial number and pin set point in PSIG.
- No loose metal or plastic shards to enter the flow stream upon opening.
- One moving part.
- The pin cannot fatigue.
- Provides a reliable signal with the proximity sensor to monitor the stem movement and gives a remote indication that the valve has opened (*Option*).
- Spare pins can be stored at the valve (*Option*).
- Balanced piston design to negate the effects of back pressure (*Option*).

# MODEL C

## ADVANTAGES

- Visual and remote indication of opening
- No fugitive emissions, even on resetting
- Does not generate metal or plastic shards
- Unaffected by pulsating pressures
- Unaffected by changing ambient temperatures on the pin
- Bubble-tight seal to set point
- Opens in milliseconds
- Operates to within 95% of set point
- Pin cannot fatigue and buckle early
- Precise pin, obeying Euler's Law, acts as a pressure sensor and actuator
- The valve can be downstream balanced so that downstream pressure does not affect set point
- Valve operates in constant back pressure, variable back pressure or vacuum

## APPLICATIONS

Provides safety for a wide variety of pressure relief applications. The ideal substitute for rupture discs.

## SPECIFICATIONS

### VALVE POSITION

Pins are sized with the valve oriented as it will be in actual use; so piston weight will not affect set point.

### PRESSURE SET POINT RANGE

5 to 2,000 PSIG.

### SIZES

1/2" to 48".

### CONNECTIONS

Standard and custom connections available.

### VALVE SEALS

Available for high and low temperatures, Viton standard.

### STANDARD MATERIALS

Body mild steel with stainless steel trim, other materials optional.

### ACCURACY

+/- 5%

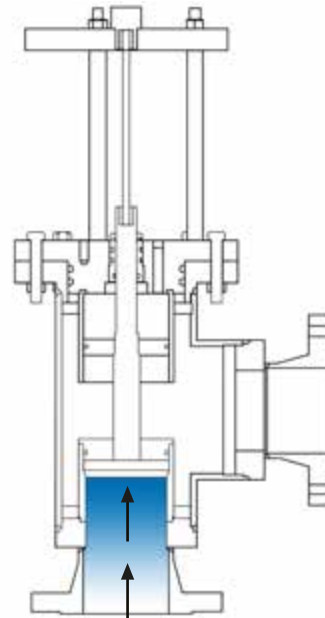
### DOWNSTREAM PRESSURE BALANCED

Optional, an additional piston balances out downstream pressure.

## OPERATION

In the closed position, an elastomer seal contacts a machined, stainless steel piston seat for a bubble-tight shut off. When the pin buckles, the piston moves off seat to allow full flow pressure relief.

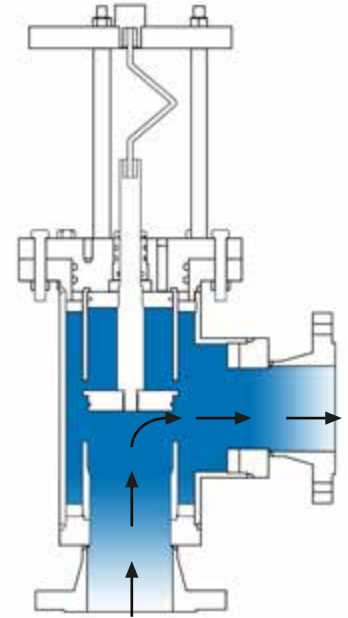
### Closed



(Straight Pin)

Pressure At Set Point

### Open



(Buckled Pin)

Pressure Below Set Point

## EULER'S LAW

$$\frac{\text{Axial Force on the Pin Causing the Pin to Buckle (Piston/Plunger Area x System Pressure)}}{\text{Pin Diameter}^4 \times \text{Pin Material Modulus of Elasticity}} \sim \frac{1}{\text{Pin Length}^2}$$

## OPTIONS

### PROXIMITY DEVICE

For remote open indication.

### PIN CONTAINER

Pin storage at the valve.

### FLUSH PORT

Washing inlet seat.

### STAINLESS STEEL PIN GUARD

Protects your pin from accidental damage